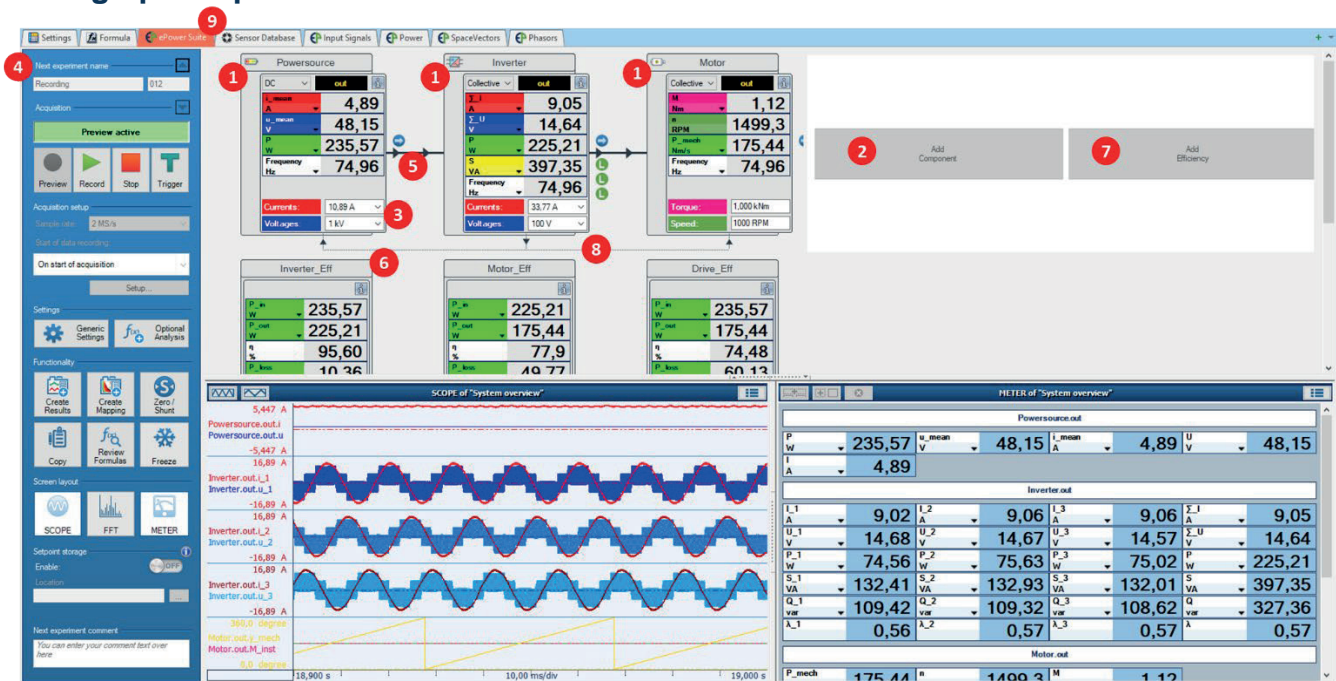


Perception V8 ePower Suite Quick Start guide

Prerequisites

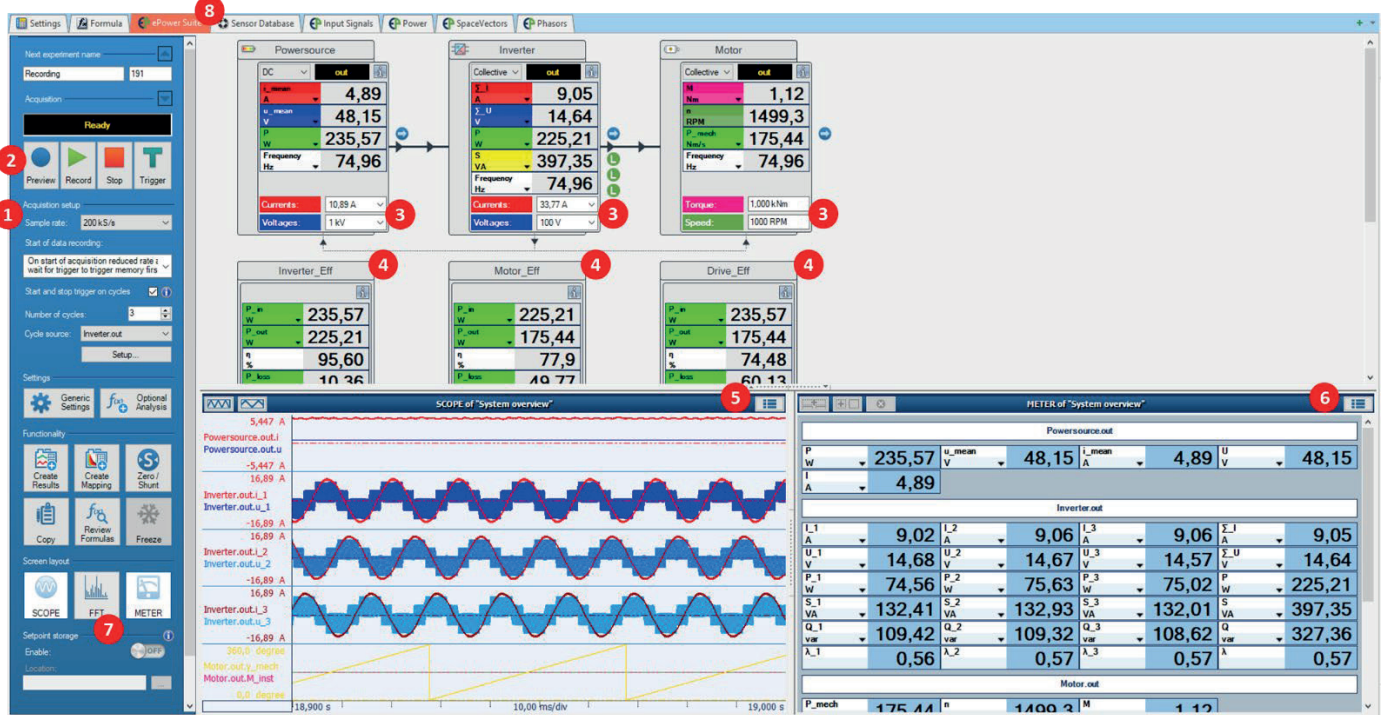
- Make sure all your sensors are available in the Sensor Database. (If not, then enter these. Refer to Perception manual for details. Current transducers should be entered with their burden resistor.)
- Load the ePower suite by selecting in Perception Settings → Manage sheets... and double-click ePower Suite.
- The ePower suite opens with a standard Powersource-Inverter-Motor setup. If required, choose a different setup through ePower Suite → Select ePower Suite Application...

Setting up components and connections



- The block ① represents a component in your measurement setup. Add components using ② Add Component which appears when clicking in the empty region.
- A component can have zero or more connectors ③. When double-clicking a component, a dedicated setup panel ④ appears where input or output connectors can be added. Double-clicking a connector shows a dedicated setup panel ④ where connector properties can be specified. The connector ③ also shows the most important measured quantities (e.g., voltage, current, active electrical power, torque, speed, mechanical power)
- One property of a connector is its connection to other connectors. The connections are shown by an arrow ⑤.
- There are dedicated efficiency blocks ⑥ which determine and show the efficiency from one (or more) connectors to another (or more) connectors. A dedicated setup menu appears when double-clicking an efficiency block where different connectors can be chosen. Click Add Efficiency ⑦ to add an efficiency block.
- Cycle detection is an important property of connectors. One can select if a connector has his own cycle detection, or if it is linked to another connector. The thin arrows ⑧ show this link between cycle detects.
- There are several dedicated ePower sheets ⑨ that give a special view on the signals that are being measured such as phasors and space vectors.

Setting up acquisition and showing results



- Before starting data acquisition, sample rate and the type of acquisition must be set up **1**. Depending on the choice of acquisition mode, several different options may be shown (e.g., Start and stop triggers on cycle).
- By selecting Preview **2**, data will be measured and shown (but not yet recorded). Pushing Record will start the recording.
- The measured data are shown as meter values in the connectors **3** and in the efficiency blocks **4**.
- Furthermore, there is a dedicated oscilloscope section **5** to show time signals and a dedicated section **6** showing meter readings for a selected connector or component. If no connector or component is selected, all signals are shown.
- An FFT display can be added as well by pushing the FFT button **7**.
- Dedicated ePower sheets **8** give a different representation of the measured signals such as raw time data, phasors and space vectors.

Some more hints

- When selecting a component, connector or efficiency block, the control panel to the left will be overlaid with a dedicated setup panel for the selected item.
- When a connector is selected, the setup panel allows for selecting the appropriate sensor(s) that are used on that connector.
- Under the hood, the ePower suite automatically generates all the real-time formulas required to calculate and display the power from electrical and mechanical measurement values, efficiencies, phasor vectors, etc. When changing settings, the ePower suite will immediately update/regenerate the formulas to reflect the change in the settings and show a progress bar on this process.